



Five a-side Football Pitch Construction

Prestige Sports Pitches design and build outdoor 5-a-side facilities. Five a-side is the most commonly played version of small-sided football.



The pitch may be enclosed by rebound boards, fences or walls or the game can be played using goal and touch lines.

A range of surfaces are used:

- Natural turf
- Artificial / synthetic grass
- Sand filled artificial grass
- Polymeric surfaces
- Macadam



Pitch Dimensions

The recommended dimensions of a five-a-side pitch are shown below. It must be rectangular and the length of the touchline must be greater than the length of the goal line. Where possible the ratio of length to width should be 2:1.

Dimensions:		5-a-side	Football	
	<i>Length</i>		Width	
Min	25.0m		16.5m	
Max	50.0m		35.0m	
Run-off	Minimum	2.0m	Minimum	2.0m
	Recommended	3.0m	Recommended	3.0m

Pitches need to have adequate run-offs to ensure players do not injure themselves and non-players do not walk too close to the pitch. The minimum and recommended sizes for run-offs are shown above.





Surface Types: Artificial surfaces have been used for playing 5-a-side football for a number of years and the range and quality is improving all the time. Prestige Civils and Sports has developed relationships with several key manufacturers and suppliers who are at the forefront of innovation and technical advance. Below are details of some of the commonly used surfaces.

Sand-Filled Artificial Grass: Sand-filled artificial grass is one of the most commonly used surfaces for 5-a-side football. To provide the correct levels of performance, a sand-filled carpet is laid over a 15mm shockpad. Most shockpads are made from rubber mixed with a resin binder, manufactured as prefabricated rolls or mixed and laid in-situ.

Maintenance of sand-filled surfaces preserves durability and performance levels. Specialist plant is used and guarantees are usually conditional on the specified maintenance being carried out and recorded.

Long Pile (3G) Artificial Football Grass

Long pile (third generation) artificial surfaces simulate the playing qualities of natural grass, can accommodate the use of studded football boots and are being developed and improved all the time. They have longer pile than sand-filled surfaces and are normally partly filled with rubber or rubber and sand.



The maintenance of long pile artificial grass is similar to that for sand-filled, taking into consideration the longer pile and rubber infill. If maintenance is not carried out, performance quality will deteriorate and the life of the carpet will be reduced. Guarantees may also be affected.



Macadam: Traditionally, one of the more common surfaces, Macadam provides a tough, long-lasting, cheap option though the surface is hard and can result in fall injuries. Porous Macadam is the best draining and most suitable for sports surfaces. It can be colour-coated.

Maintenance is relatively easy and inexpensive:

- removal of leaves and other detritus from the playing surface
- power washing of porous surfaces to remove the dirt and debris that collects within the macadam surface
- application of moss killer when required on porous surfaces
- re-colour coating, where appropriate, approximately every five years

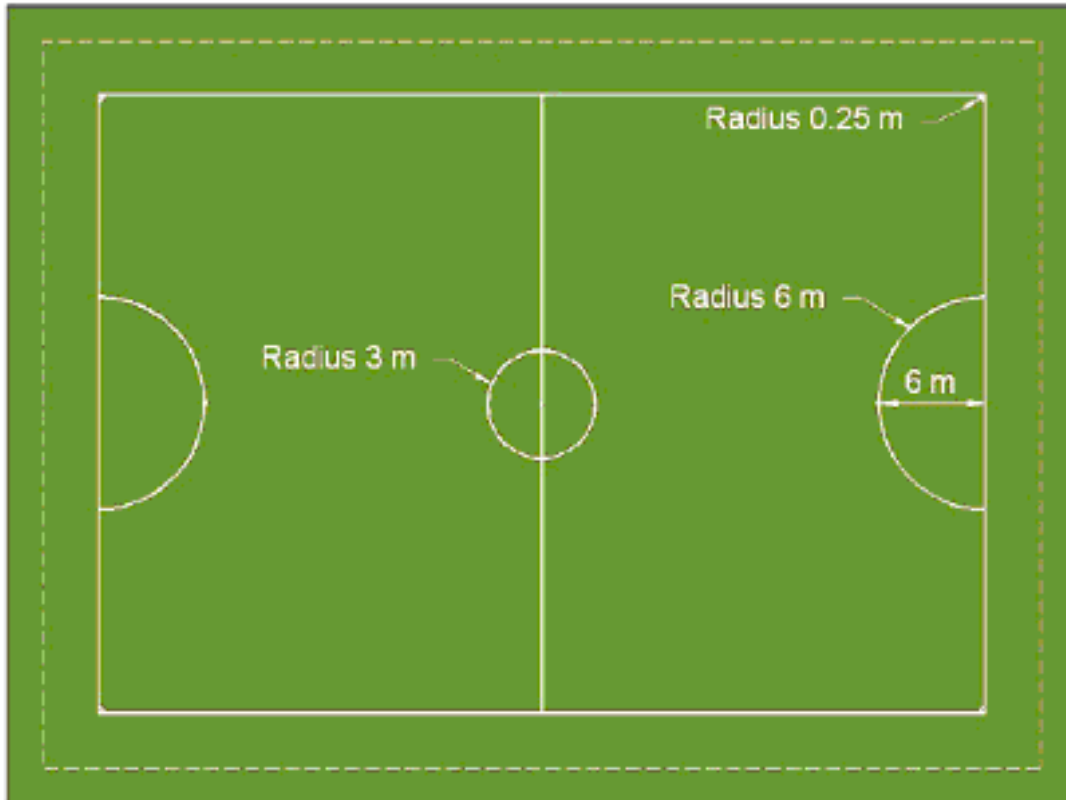
Polymeric Surfaces: Polymeric surfaces are made from rubber granules bonded together with a binder. Laid in a continuous layer across the area, and colour coated, the shock absorbing surface is porous and durable.

The maintenance of polymeric surfaces is similar to macadam surfaces, although the colour coating may need to be re-applied more frequently as wear can make the surface slippery.





Pitch Markings: Pitch lines should be 8cm wide and coloured white or yellow outdoors and white, yellow or red indoors.



The two long (solid) boundaries are the touchlines; the two shorter solid lines are the goal lines. The dotted lines show the run-offs.

The pitch is divided into two halves by the halfway line. The centre mark is positioned at the mid point of the halfway line. A circle with a radius of 3.0m (diameter 6.0m) is marked around it (irrespective of the pitch size).

The penalty area for each goal is formed by a semi-circle of radius 6m (irrespective of the pitch size) measured from the midpoint of the goal line.

The extremities of the semi-circles should reach the goal line, barrier or wall regardless of whether or not the goal posts encroach into the playing area.

The penalty mark should be 6m from the mid point between the goal posts and equidistant from them.

Pitches that are not enclosed (and have run-offs) should have corner arcs marked. These are quarter circles of radius 25cm from each corner of the pitch drawn inside the pitch.



Fencing: Perimeter fencing is erected around a pitch to contain balls, to protect the playing surface and to help prevent unauthorised use and vandalism. It can also form the boundaries of a 5-a-side football pitch.



Fencing is usually erected to 3.0m with 4.5m behind goals and in areas where containment of balls is important e.g. adjacent to roads. It typically comprises weld-mesh panels suspended from box section posts. Close gauge mesh can be used in goal areas and other areas of high impact for better resistance.

Steelwork should be galvanised to minimise corrosion and can be plastic coated for aesthetic effect.

1.2m high rebound walls are often installed on 5-a-side pitches. They are commonly made from stained or painted exterior grade timber. Close gauge weld mesh panels are a good option for noise reduction (can help planning applications), durability and pitch visibility.

Access gates and doors should open outwards to ensure the safety of players. Single gates should be at least 1.2m wide to allow wheelchair access and gate thresholds should be level or slightly ramped (i.e. not stepped). Gates should also be positioned so they do not create congested gathering points. Access should be sufficient for emergency vehicles and maintenance equipment.



Rebound Boards: Five-a-side football pitches are normally enclosed. Rebound boards should be at least 1.2m high. Suspended nets are often hung above the boards to ensure balls remain within the area of the pitch and do not interfere with adjacent activities.

Outdoor Lighting: If an outdoor pitch is to be lit the lighting system should be designed to achieve the performance detailed below. To minimise running costs the lighting system may be designed to give a lower level of lighting for recreational play and training but this should be no lower than a maintained average luminance of 75 lux.

Floodlighting	Outdoor 5-a-side Football
Property	Requirement
Maintained Average Luminance	> 120 Lux
Uniformity (Min/Ave)	> 0.6
Glare rating	□□50
Lamp Colour Temperature	Tk > 4000 K
Lamp Colour Rendering	□□65





Goals

The recommend size of goals is 3.66m wide by 1.83m high.



Goal safety is very important as incorrectly installed and operated goals can result in fatal accidents. Goals should always be secured to European or British standards. Goal storage is also an important consideration and designated storage areas should be factored into project plans (pitch run-offs are not suitable storage areas).

Routine Pitch Maintenance (at least weekly):

- Drag matting / brushing to redistribute infill
- Brushing to lift the pile. Failure to do so will result in a faster surface, fibrillation and matting of the pile and a deterioration in performance
- Localised topping up (penalty spot etc) of fill materials to ensure consistent surface response and to provide support to the carpet's pile.
- The removal of litter, leaves and other debris from the surface
- Removal of moss or weeds particularly around the edges of the pitch where it is harder to use mechanical brushes.

Planning Permission: Planning permission is often required for pitch construction and it is worth establishing early on whether or not you will need it.

